

Exhibit JDM-1

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Dr. Makhholm specializes on the issues of financing, pricing and general regulation issues for electricity, gas and water utilities. Another of Dr. Makhholm's area of specialty involves the privatization, regulation and deregulation of energy and transportation industries—those that operate networks (such as oil and gas pipelines, electricity transmission and gas distribution systems, telecommunications and water utility systems, railroads and toll roads) and those operating infrastructure business at specific sites, such as oil refineries, electricity generation plants, gas treatment plants, commodity mines, water treatment plants and airports. These issues include the broad categories of efficient pricing, market definition and the components of reasonable regulatory and contracting practices. On such issues among others, Dr. Makhholm has prepared expert testimony, reports and statements, and has appeared as an expert witness in court proceedings, arbitral tribunals, regulatory bodies and Parliamentary panels on more than 250 occasions.

Dr. Makhholm's clients in North America include privately held oil, gas and utility corporations, public corporations and government agencies. He has represented dozens of gas and electric distribution utilities, as well as both intrastate and interstate oil and gas pipeline companies and oil, gas and electricity producers. Dr. Makhholm has also worked with many leading law firms engaged in issues pertaining to the local and interstate regulation of energy utilities.

Internationally, Dr. Makhholm has directed an extensive number of projects in the mining, utility (electricity, gas and water) and transportation businesses in 20 countries on six continents. These projects have involved work for investor-owned and regulated business as well as for governments and the World Bank. These projects have included advance pricing and regulatory work prior to major gas, railroad and toll highway privatizations (Poland, Argentina, Bolivia, Mexico, Chile and Australia), gas industry restructuring and/or pricing studies (Canada, China, Spain, Morocco, Mexico and the United Kingdom), utility mergers and market power analyses (New Zealand), gas development and and/or contract and financing studies (Tanzania, Egypt, Israel and Peru), regulatory studies (Chile, Argentina), oil pipeline transport financing and regulation (Russia), and valuating in hard commodity mining (Russia, Peru, Colombia, New Zealand). As part of this work, Dr. Makhholm has prepared reports, drafted regulations and conducted training sessions for many government, industry and regulatory personnel.

Dr. Makhholm has published many papers in various peer-reviewed and editor-reviewed publications (*Review of Environmental Economics and Policy*, *Economics of Energy & Environmental Policy*, *Public Utilities Fortnightly*, *Natural Gas and Electricity*, *The Electricity Journal*, *The Energy Law Journal*, and *Competition and Regulation in Network Industries*)—involving a wide range of subjects pertaining to his research work. He is a frequent speaker in the U.S., Europe and elsewhere at conferences and seminars addressing market, pricing and regulatory issues for the energy, commodity and transportation sectors. His latest book, *The Political Economy of Pipelines: A Century of Comparative Institutional Development*, was published by the University of Chicago Press in 2012 and re-issued in Chinese in 2016 by Beijing's Petroleum Institute Press.

EDUCATION

UNIVERSITY OF WISCONSIN-MADISON,
MADISON, WISCONSIN
Ph.D., Economics, 1986
Dissertation: Sources of Total Factor Productivity in the Electric Utility Industry
M.A., Economics, 1985

BROWN UNIVERSITY
PROVIDENCE, RHODE ISLAND
Graduate Study, 1980-1981

UNIVERSITY OF WISCONSIN-MILWAUKEE
MILWAUKEE, WISCONSIN
M.A., Economics, 1980
B.A., Economics, 1978

EMPLOYMENT

1996-present	<u>Senior Vice President/Managing Director.</u> National Economic Research Associates, Inc., (NERA) Boston, Massachusetts.
1986-1996	<u>Vice President/Senior Consultant.</u> National Economic Research Associates, Inc., (NERA) Boston, Massachusetts.
1987-1989	<u>Adjunct Professor.</u> College of Business Administration, Northeastern University, Boston, Massachusetts
1984-1986	<u>Consulting Economist.</u> National Economic Research Associates, Inc., (NERA) Madison, Wisconsin.
1983-1984	<u>Consulting Economist.</u> Madison Consulting Group, Madison, Wisconsin.
1981-1983	<u>Staff Economist.</u> Associated Utility Services, Inc., Moorestown, New Jersey.

RECENT TESTIMONY (SINCE 2000)

Before the Federal Energy Regulatory Commission, Comments in the Matter of the FERC Notice of Inquiry Regarding Certification of New Interstate Gas Facilities, Docket No. PL18-1-000, July 25, 2018.

Before the Ontario Energy Board, Expert Report and Direct Testimony in case EB-2017-0307 on behalf of Enbridge Gas Distribution and Union Gas Limited regarding support of the productivity offset (the *X-factor*) to be used in the price cap formula that will apply to the two distribution businesses for the upcoming deferred rebasing periods, November 23, 2017.

Before the International Court of Arbitration, Case No. 19576/CA/ASM, Drummond Coal Mining LLC (DCM), et al, Respondents/Counterclaimants, vs. Ferrocarriles del Norte de Colombia S.A., Claimant/Counter-Respondent, Third Expert Report, 1 November 2017. Subject: Market values of mining export losses due to imposed constraints on capacity.

Before the New York State Public Service Commission, Rebuttal Testimony on behalf of the Retail Energy Supply Association (RESA). October 27, 2017. Subject: Provide perspective regarding the operation of retail energy markets in New York state.

Before the New York State Public Service Commission, Direct Testimony on behalf of the Retail Energy Supply Association (RESA). September 15, 2017. Subject: Provide perspective regarding the operation of retail energy markets in New York state.

Before the International Court of Arbitration, Case No. 19576/CA/ASM, Drummond Coal Mining LLC (DCM), et al, Respondents/Counterclaimants, vs. Ferrocarriles del Norte de Colombia S.A., Claimant/Counter-Respondent, Second Expert Report, 29 August 2017. Subject: Response to alleged damages claimed as a result of failure to meet contractual rail shipment obligations.

Before the Michigan Public Service Commission, Direct Testimony on behalf of Constellation NewEnergy Inc., Case No U-18248. July 21, 2017. Subject: Economic analysis of proposed charges for electricity capacity in Michigan.

Before the Michigan Public Service Commission, Direct Testimony on behalf of Constellation NewEnergy Inc., Case No U-18239. July 17, 2017. Subject: Economic analysis of proposed charges for electricity capacity in Michigan.

Before the International Court of Arbitration, Case No. 19576/CA/ASM, Drummond Coal Mining LLC (DCM), et al, Respondents/Counterclaimants, vs. Ferrocarriles del Norte de Colombia S.A., Claimant/Counter-Respondent, Expert Report, 20 June 2017. Subject: Market values of mining export losses due to imposed constraints on capacity.

Before the National Energy Board, Expert Report and Reply Testimony on behalf of Plains Midstream Canada ULC. Hearing Order RH-002-2016, May 15, 2017. Subject: Proper cost allocation for liquid fuel pipeline tariffs.

Before the National Energy Board, Expert Report and Direct Testimony on behalf of Plains Midstream Canada ULC. Hearing Order RH-002-2016, November 2016. Subject: Proper cost allocation for liquid fuel pipeline tariffs.

Before the Supreme Court of the State of New York, County of New York, Expert Testimony on behalf of plaintiffs in: S.A. de Obras y Servicios, Copasa and Cointer Chile, S.S. and Azvi Chile, S.A. Agencia en Chile, Plaintiffs v. The Bank of Nova Scotia and Scotiabank Capital, IAS Part 49, Index No. 651649/2013 and 651555/2012. August 10, 2016, Subject: Value of P3 toll road enterprise in Chile.

Before the National Energy Board, Expert Testimony on behalf of FortisBC Energy Inc., Hearing Order Number GH-003-2015, March, 2016. Subject: Tolling for pipeline extensions

Before the Superior Court of the State of Delaware in and for New Castle County, Expert Report on behalf of Deere & Company, in C.A. No. N13C-07-330 MMJ CCLD. December 2, 2015. Subject: Value of Power Purchase Agreements in the wind power industry.

Before the Superior Court of the State of California for the County of Los Angeles in the Matter of GAF Materials Corporation v. Paramount Petroleum Corporation, Opinion given September 3, 2015. Case No: BC 481673. Subject: Oil price indexing to set asphalt prices.

Before the United States District Court for the Northern District of Oklahoma, Expert Report on behalf of SFF-TIR, LLC, the Stuart Family Foundation (et al), Case No. 14-CV-369-TCK-FHM, June 30, 2015. Subject: Fair value of shares in a pipeline industry services firm.

Before the International Chamber of Commerce Expert Report on behalf of STP Energy Pte Ltd. Subject: Valuation of offshore oil and gas exploration permit, April 29, 2015.

Before the Régie de l'énergie, Written Evidence on behalf of Gaz Métro. Subject: Pricing of gas distribution system expansion, January 20, 2015

Before the Supreme Court of Western Australia, Filed Statement on behalf of North West Shelf Pty Ltd, Subject: Value and interpretation of gas swaps agreement, December 24, 2014.

Before the District Court of Tarrant County, Texas, 17th Judicial District, Expert Report of Jeff D. Makhholm on behalf of OAO Gazprom, et al, Subject: Valuation of failed LNG import project, November 14, 2014.

Before the National Energy Board, Expert Report and Direct Testimony on behalf of MAS (Market Area Shippers Group), Hearing Order RH-001-2014, July 2014. Subject: Effectiveness of toll design//regime in settlement.

Before the National Energy Board, Expert Testimony on behalf of FortisBC Energy Inc., Hearing Order Number GH-001-2014, July 10, 2014. Subject: Tolling for pipeline extensions.

Before the National Energy Board, Expert Testimony on behalf of Alliance Pipeline, May 22, 2014. Subject: Restructuring services/tolls.

Before the Economic Regulation Authority of Western Australia on behalf of ATCO Gas Australia, March 2014. Subject: Cost accounting for gas pipeline regulation.

Before the 298th Judicial District Court of Dallas County, Texas, Expert Testimony on behalf of plaintiff in Energy Transfer Partners, L.P., and Energy Transfer Fuel, L.P. v. Enterprise Products Partners, L.P., Enbridge (US) Inc., and Enterprise Products Operating LLC, Cause No. 11-12667, February 2014. Subject: Assessment of causation and valuation of damages from lost crude oil pipeline opportunity.

Before the National Energy Board, Expert Testimony on behalf of Enbridge Gas Distribution Inc. and Union Gas limited, Hearing Order MH-001-2013, November 1, 2013. Subject: Tolling issues involving pipeline abandonment.

Before the National Energy Board, Expert Report and Direct Evidence on behalf of MAS (Market Area Shippers Group), Hearing Order RH-001-2013, July 26, 2013. Subject: Contract renewal provisions.

Before the 298th Judicial District Court of Dallas County, Texas, Supplemental Report on behalf of plaintiff in Energy Transfer Partners, L.P., and Energy Transfer Fuel, L.P. v. Enterprise Products Partners, L.P., Enbridge (US) Inc., and Enterprise Products Operating LLC, Cause No. 11-12667, July 24, 2013. Subject: Causation and damages in abandoned joint oil-pipeline venture

Before the 298th Judicial District Court of Dallas County, Texas, Rebuttal Expert Report on behalf of plaintiff in Energy Transfer Partners, L.P., and Energy Transfer Fuel, L.P. v. Enterprise Products Partners, L.P., Enbridge (US) Inc., and Enterprise Products Operating LLC, Cause No. 11-12667, March 2013. Subject: Causation and damages in abandoned joint oil-pipeline venture

Before the 298th Judicial District Court of Dallas County, Texas, Direct Expert Report on behalf of plaintiff in Energy Transfer Partners, L.P., and Energy Transfer Fuel, L.P. v. Enterprise Products Partners, L.P., Enbridge (US) Inc., and Enterprise Products Operating LLC, Cause No. 11-12667, January 2013. Subject: Causation and damages in abandoned joint oil-pipeline venture

Before the Alberta Public Utility Commission, Direct Testimony on behalf of ATCO Electric and ATCO Gas, Proceeding ID #2131, December 2012. Subject: Analysis of ATCO Electric's and ATCO Gas' capital tracker proposals

Before the American Arbitration Association, Expert Report with Dr. Victor P. Goldberg, Case No. AAA No. 16 132 Y 00502 11. December 17, 2012. Subject: Confidential Arbitration.

Before the National Energy Board, Written Evidence on behalf of FortisBC Energy Inc., Hearing Order GH-001-2012, May 29, 2012. Subject: Tariff treatment for pipeline extensions to new Canadian gas production regions.

Before the National Energy Board, Expert Report and Direct Testimony on behalf of Market Area Shippers Group, Hearing Order RH-003-2011, March 2012. Subject: Assessment of TransCanada's omnibus restructuring proposal and commentary on Market Area Shippers Group's alternative solution.

Before the Alberta Public Utility Commission (with Agustin J. Ros). Reply Expert Report. Application No. 1606029, AUC Proceeding 566. February 22, 2012. Subject: Update to TFP analysis and review of PBR plans for the Commission's performance-based regulation initiative.

Before the State Corporation Commission of the State of Kansas, Testimony on Behalf of Coffeyville Resources Refining & Marketing, LLC, Docket No. 12-MDAP-068-RTS. October 25, 2011. Subject: Reasonable ratemaking methodology.

Before the United States Federal Energy Regulatory Commission, Prepared Direct Testimony in Public Utilities Commission of Nevada and Sierra Pacific Power Company v Tuscarora Gas Transmission Company, Docket No. RP11-1823-000. October 17, 2011. Subject: Reasonable interstate gas pipeline tariff levels.

Before the Public Utilities Commission of Nevada, Pre-filed Rebuttal Testimony on behalf of Nevada Power Company and Sierra Pacific Power Company d/b/a NV Energy. Docket Nos. 11-03003, 11-03004 & 11-03005. August 3, 2011. Subject: Prudence of hedging practices.

Before the United States Federal Energy Regulatory Commission, Affidavit in Public Utilities Commission of Nevada and Sierra Pacific Power Company v Tuscarora Gas Transmission Company, Docket No. RP11-1823-000. February 28, 2011. Subject: Reasonable interstate gas pipeline tariff levels.

Before the Public Utilities Commission of Nevada, Prepared Direct on behalf of Nevada Power Company d/b/a NV Energy, 2011 Gas and Electric Deferred Energy Proceeding, Docket No. 11-03 _____. February 24, 2011. Subject: Prudence of hedging practices.

Before the Public Utilities Commission of Nevada, Prepared Direct on behalf of Sierra Pacific Power Company d/b/a NV Energy, 2011 Gas Deferred Energy Proceeding, Docket No. 11-03 _____. February 24, 2011. Subject: Prudence of gas hedging practices.

Before the Federal Energy Regulatory Commission and the State of Alaska Regulatory Commission, Prepared Direct Testimony on behalf of Trans Alaska Pipeline System. Docket No. IS09-348-004, *et al.* January 21, 2011. Subject: Prudence of capital rehabilitation costs.

Expert report filed before the Alberta Public Utility Commission (with Agustin J. Ros). Application No. 1606029, AUC Proceeding 566. December 30, 2010. Subject: Total factor productivity study for use in the Commission's performance-based regulation initiative.

Before the Commonwealth of Kentucky, Edmonson Circuit Court. Opinion on behalf of plaintiff in Honeycutt vs. Atmos Energy Corporation. Docket No. 09-CI-00198 and 10-CI-00040. September 10, 2010. Subject: Valuation of natural gas for royalty computations.

Before the Régie de l'Énergie, Direct Testimony on behalf of Hydro-Québec TransÉnergie. Demande R-3738-2010. August 2, 2010. Subject: Economic analysis of issues related to the regulatory policies for network upgrades.

Before the Public Utilities Commission of Nevada, Pre-Filed Supplemental Direct Testimony on behalf of Nevada Power Company, Sierra Pacific Power Company d/b/a NV Energy (electric and gas departments), Docket No: 10-03003, 10-03004, 10-03005. May 5, 2010. Subject: Gas hedging.

Before the Arkansas Public Service Commission, Rebuttal Testimony on behalf of Entergy Arkansas, Inc., Docket No. 09-084-U. March 24, 2010. Subject: Justification of the operation of a multi-year formula rate plan.

Before the Public Utilities Commission of Nevada, Pre-Filed Direct on behalf of Nevada Power Company, Docket No. 10-03003. February 26, 2010. Subject: Prudence of gas purchase costs.

Before the New York State Public Service Commission, Rebuttal Testimony on behalf of Rochester Gas and Electric Corporation, Case 09-E--07717 Case 09-G-0718 and New York State Electric & Gas Corporation, Case 09-E-0715, Case 09-E-0716. February 12, 2010. Subject: Cost of equity capital.

Before the Public Utilities Commission of Nevada, Pre-Filed Direct Testimony on behalf of Sierra Pacific Power Company, Docket No. 09-09001. December 15, 2009. Subject: Gas hedging plan.

Before the Public Utilities Commission of Nevada, Pre-Filed Direct Testimony on behalf of Nevada Power Company , Docket No. 09-07003. December 15, 2009. Subject: Gas hedging plan.

Before the New York State Public Service Commission, Direct Testimony on behalf of Rochester Gas and Electric Corporation, Case 09-E--07717 Case 09-G-0718. September 17, 2009. Subject: Cost of capital and capital structure.

Before the New York State Public Service Commission, Direct Testimony on behalf of New York State Electric & Gas Corporation, Case 09-E-0715, Case 09-E-0716. September 17, 2009. Subject: Cost of capital and capital structure.

Before the Arkansas Public Service Commission, Direct Testimony on behalf of Entergy Arkansas, Inc., Docket No. 09-084-U. September 4, 2009. Subject: Justification of the operation of a multi-year formula rate plan.

Submission before the New Zealand Commerce Commission, on behalf of Orion New Zealand Limited, July 31, 2009. Subject: Theory and practice of price cap regulation.

Before the Hawaii Public Utilities Commission, Testimony on behalf of Hawaiian Electric Company Inc., Docket No. 2008-0083. July 2009. Subject: Energy cost adjustment clause.

Before the Public Utilities Commission of Nevada, Pre-Filed Direct Testimony on behalf of Nevada Power Company , Docket No. 09-02____. February 27, 2009. Subject: Prudence of gas purchase costs.

Before the Public Utilities Commission of Nevada, Pre-Filed Direct Testimony on behalf of Sierra Pacific Power Company, Docket No. 09-02____. February 27, 2009. Subject: Prudence of gas purchase costs.

Before the Department of Public Utility Control of Connecticut, Direct Testimony on behalf of Connecticut Natural Gas Corporation. Docket No. 08-12-06. January 11, 2009. Subject: Cost of capital.

Before the Department of Public Utility Control of Connecticut, Direct Testimony on behalf of Southern Connecticut Gas Corporation. Docket No. 08-12-06. January 11, 2009. Subject: Cost of capital.

Before the Public Utility Commission of Texas, Rebuttal Testimony on behalf of Lone Star Transmission, LLC. Docket No. 35665. November 14, 2008. Subject: Licensing of new electricity transmission projects.

Before the Public Utilities Commission of Ohio, Direct Testimony on behalf of The Dayton Power and Light Company. Case No. 08-1094-EL-SSO. October 10, 2008. Subject: Cost of capital.

Before the Illinois Commerce Commission, Rebuttal Testimony on behalf of Northern Illinois Gas Company, Case No. 08-0363. September 25, 2008. Subject: Cost of capital.

Before the Illinois Commerce Commission, Testimony on behalf of Northern Illinois Gas Company, Case No. 08-0363. April 29, 2008. Subject: Cost of equity.

Before the Illinois Commerce Commission, Rebuttal Testimony on behalf of Shelby Coal Holdings, LLC, Christian Coal Holdings, LLC and Marion Coal Holdings, LLC. Docket No. 07-0446. April 7, 2008. Subject: Pipeline certification and competition in pipeline transport market.

Before the New York State Public Service Commission, Rebuttal Testimony on behalf of Iberdrola, S.A., Energy East Corporation, RGS Energy Group, Inc., Green Acquisition Capital, Inc., New York State Electric & Gas Corporation and Rochester Gas and Electric Corporation, Case No. 07-M-0906. January 31, 2008. Subject: Regulatory philosophy/ merger issues.

Before the Public Utilities Commission of Nevada, Rebuttal Testimony on behalf of Sierra Pacific Power Company, Docket No. 07-09016. January 14, 2008. Subject: Stand-alone costs and cost allocation issues.

Before the Public Utilities Commission of Nevada, Rebuttal Testimony on behalf of Sierra Pacific Power Company. Docket No. 07-09016. January 11, 2008. Subject: Allocation of pipeline transport costs.

Before the Illinois Commerce Commission, Testimony on behalf of Shelby Coal Holdings, LLC, Christian Coal Holdings, LLC and Marion Coal Holdings, LLC. Docket No. 07-0446. January 7, 2008. Subject: Pipeline certification and competition in pipeline transport market.

Before the Federal Energy Regulatory Commission, Affidavit on behalf of Consolidated Edison Company of New York, Docket No. OA08-13-000. January 7, 2008. Subject: Planning and allocation of electric transmission costs.

Before the Public Utilities Commission of Nevada, Direct Testimony on behalf of Sierra Pacific Power Company, Docket No. 07-09016. December 14, 2007. Subject: Stand-alone costs and cost allocation issues.

Before the New Hampshire Public Service Commission, Docket No. DE 07-064, invited appearance on an expert panel to present perspectives and answer questions on policies and practices regarding retail gas and electric distribution rate "decoupling," November 7, 2007.

Before the Public Utilities Commission of Nevada, Prefiled Direct Testimony on behalf of Sierra Pacific Power Company, Docket No. 07-05019. May 15, 2007. Subject: Prudence of gas purchase costs.

Before the United States Bankruptcy Court, Southern District of New York, Supplemental Report on behalf of Solutia, Inc., *et al.*, Debtors, Case No. 03-17949 (PCB) (Jointly Administered), April 20, 2007. Subject: Discount rate for contract rejection damages.

Before the Public Utilities Commission of Nevada, Rebuttal Testimony on behalf of Sierra Pacific Power Company, Docket No. 06-12001. April 19, 2007. Subject: Stand-alone costs and cost allocation issues.

Before the United States Bankruptcy Court, Southern District of New York, Supplemental Report on behalf of Solutia, Inc., *et al.*, Debtors, Case No. 03-17949 (PCB) (Jointly Administered), March 23, 2007. Subject: Discount rate for contract rejection damages.

Before the United States District Court, District of Kansas, Expert Report on behalf of J.P. Morgan Trust Company, *et al.* in the matter of J.P. Morgan Trust Company, *et al.* V. Mid-America Pipeline Company, *et al.*, Docket No. 05-CV-2231-CM/JPO. March 21, 2007. Title: "Harm to Farmland's Coffeyville Refinery Expert Report", by Jeff. D. Makhholm.

Before the Public Utilities Commission of Nevada, Prefiled Direct Testimony on behalf of Nevada Power Company, Docket No. 07-01022. January 16, 2007. Subject: Prudence of gas purchase costs.

Before the Public Utilities Commission of the State of Hawaii, Supplemental Testimony on behalf of Hawaii Electric Light Company, Inc., Docket No. 05-0135. December 29, 2006. Subject: Energy cost adjustment clause.

Before the Public Utilities Commission of the State of Hawaii, Testimony on behalf of Hawaiian Electric Company, Inc., Docket No. 2006-0386. December 22, 2006. Subject: Energy cost adjustment clause.

Before the Public Utilities Commission of Nevada, Pre-filed Direct Testimony on behalf of Sierra Pacific Power Company, Docket No. 06-12001. December 1, 2006. Subject: Stand-alone costs and cost allocation issues.

Before the State of New Jersey Board of Public Utilities, Prepared Reply Testimony on behalf of Public Service Electric & Gas, OAL Docket No. PUC1191-06 and BPU Docket No. EO05111005. November 3, 2006. Subject: Unregulated contract prices for telecommunication conduit rental contracts.

Before the State of New Jersey Board of Public Utilities, Rebuttal Testimony on behalf of the New Jersey American Water Company, Case No. WR06030257, October 10, 2006. Subject: Cost of Capital.

Before the Public Utilities Commission of Nevada, Rebuttal Testimony on behalf of Sierra Pacific Power Company, Docket No. 06-05016. October 2, 2006. Subject: Prudence of gas purchase costs.

Before the Federal Energy Regulatory Commission, Reply Testimony on behalf of the State of Alaska, Docket No. OR05-2-001, August 11, 2006. Subject: Relative risk and capital structure for the Trans Alaska Pipeline System (TAPS).

Before the Maine Public Utilities Commission, Response to the Bench Analysis on behalf of Central Maine Power Company, Docket 2005-729. May 19, 2006. Subject: Specification of productivity offset for price cap formula.

Before the Public Utilities Commission of Nevada, Rebuttal Testimony on behalf of Sierra Pacific Power Company, Docket No. 05-12001. May 17, 2006. Subject: Prudence of the company's gas hedging strategy.

Before the Public Utilities Commission of Nevada, Prefiled Direct Testimony on behalf of Sierra Pacific Power Company (Gas Division, WestPac Gas), Docket No. 06-0516. May 15, 2006. Subject: Prudence of the company's gas hedging strategy.

Before the State of New Jersey Board of Public Utilities, Testimony on behalf of the New Jersey American Water Company, Case No. WR06030257, March 29, 2006. Subject: Cost of Capital.

Before the Public Utilities Commission of Nevada, Direct Testimony on behalf of Nevada Power Company, Docket No.06-01016. January 17, 2006. Subject: Prudence of the company's gas hedging costs.

Before the New Brunswick Board of Commissioners of Public Utilities, Rebuttal Testimony on behalf of the Public Intervenor, Board Reference 2005-002. December 30, 2005 (original filing), January 23, 2006 (updated filing). Subject: Cost of capital.

Before the Public Utilities Commission of Nevada, Pre-Filed Direct Testimony on behalf of Sierra Pacific Power Company, Docket No.05-12001. December 1, 2005. Subject: Prudence of the company's gas hedging costs.

Before the Public Utilities Commission of Nevada, Pre-Filed Rebuttal Testimony on behalf of Sierra Pacific Power Company, Docket No.05-9016. December 2, 2005. Subject: Prudence of the company's energy supply plan.

Before the Public Utilities Commission of Nevada, Pre-Filed Rebuttal Testimony on behalf of Nevada Power Company, Docket No.05-9017. December 2, 2005. Subject: Prudence of the company's energy supply plan.

Before the Public Utilities Commission of Ohio, Supplemental Testimony on behalf of The Dayton Power and Light Company. Case No. 05-276-EL-AIR. September 26, 2005. Subject: Cost of capital.

Before the Illinois Commerce Commission, Surrebuttal Testimony on behalf of Northern Illinois Gas Company d/b/a Nicor Gas Company. Case No. 04-0779. May 12, 2005. Subject: Cost of capital.

Before the United States Bankruptcy Court, Northern District of Texas, Fort Worth Division, Reply Report on behalf of Mirant Corporation, et al, Debtors. Case No. 03-46590 (Jointly Administered). April 12, 2005. Subject: Pipeline capacity valuation.

Before the Public Utilities Commission of Nevada, Rebuttal Testimony on behalf of Sierra Pacific Power Company. Docket No 05-1028. April 12, 2005. Subject: Prudence of gas purchase costs.

Before the Illinois Commerce Commission, Rebuttal Testimony on behalf of Northern Illinois Gas Company d/b/a Nicor Gas Company. Case No. 04-0779. April 5, 2005. Subject: Cost of capital.

Before the United States Bankruptcy Court, Northern District of Texas, Fort Worth Division, Report on behalf of Mirant Corporation, et al, Debtors. Case No. 03-46590 (Jointly Administered). March 22, 2005. Subject: Pipeline capacity valuation.

Before the Public Utilities Commission of the State of Oregon, Direct Testimony and Exhibits on behalf of Portland General Electric. Docket No.UE-88 Remand. February 15, 2005. Subject: The cost consequences of abandoning the regulatory compact in Oregon on prudent invested capital.

Before the Louisiana Public Service Commission, testimony on behalf of Entergy Gulf States, Ind., and Entergy Louisiana, Inc., in Re: Analysis of Competitive Implications, Consolidated Docket No. U-21453, et al, January 13, 2005. Subject: Retail electricity competition.

Before the Public Utilities Commission of Nevada, Testimony and Exhibits on behalf of Sierra Pacific Power Company. Docket No 05-1028. January 5, 2005. Subject: Prudence of gas purchase costs.

Before the Public Utility commission of Oregon, Direct Testimony on behalf of Portland General Electric. Docket No. UE-165. November 17, 2004. Subject: Power supply risk related to PGE's hydroelectric generation sources.

Before the Public Utilities Commission of Nevada, Testimony on behalf of Nevada Power Company. Docket No. 04-11028. November 10, 2004. Subject: Examination of the prudence of gas purchase and hedging decision in the Company's 2004 deferral case.

Before the Illinois Commerce Commission, Testimony on behalf of Nicor Gas Company. Docket No. 04-0779. November 1, 2004. Subject: Cost of Capital.

Rebuttal Report for an ad-hoc arbitration on behalf of CITIBANK, N.A. in their case against NEW HAMPSHIRE INSURANCE COMPANY. Policy No. 576/ MF5113500. October 15, 2004. Subject: Claimants right to collect on a political risk insurance policy as a result of the expropriation of a toll-road concession's assets in Argentina.

Before the International Center for the Settlement of Investment Disputes, Testimony on behalf of Azurix Corp., in the case of Azurix Corp v. Government of Argentina in Paris, France, October 11th, 2004. Subject: Expropriation of a water utility concession in the province of Buenos Aires.

Before the Circuit Court of Fairfax, Virginia, Testimony on behalf of Upper Occoquan Sewage Authority in the case against Blake Construction Co., Inc., Poole and Kent, a Joint Venture. Case No. 206595. October 1, 2004. Subject: Valuation of capacity expansion project.

Expert Report for an ad-hoc arbitration on behalf of CITIBANK, N.A. in their case against NEW HAMPSHIRE INSURANCE COMPANY. Policy No. 576/ MF5113500. October 1, 2004. Subject: Claimants right to collect on a political risk insurance policy as a result of the expropriation of a toll-road concession's assets in Argentina.

Before the London Courts of International Arbitration, Rebuttal Report on behalf of CITIBANK, N.A. AND DRESDNER BANK AG in their case against AIG EUROPE (UK) LTD. AND SOVEREIGN RISK INSURANCE. Arbitration No. 3473. September 17, 2004. Subject: Claimants right to collect on a political risk insurance policy as a result of the expropriation of electric utility assets in Argentina.

Before the London Courts of International Arbitration, Expert Report on behalf of CITIBANK, N.A. AND DRESDNER BANK AG in their case against AIG EUROPE (UK) LTD. AND SOVEREIGN RISK INSURANCE. Arbitration No. 3473. August 6, 2004. Subject: Claimants right to collect on a political risk insurance policy as a result of the expropriation of electric utility assets in Argentina.

Before International Center for the Settlement of Investment Disputes, Rebuttal Report on behalf of Azurix Corp., in the case of Azurix Corp v. Government of Argentina, April 15th, 2004. Subject: Expropriation of a water utility concession in the province of Buenos Aires.

Before the Public Utilities Commission of Nevada, Rebuttal Testimony on behalf of Sierra Pacific Power Company. Case No: 03-12002. March 29, 2004. Subject: Rebutted argument that there was a link between the merger and the cost of electricity in the post-merger period.

Before the Public Utilities Commission of Nevada, Rebuttal Testimony on behalf of Nevada Power Company. Case No: 03-10001 and 03-10002. February 5, 2004. Subject: Rebutted argument that there was a link between the merger and the cost of electricity in the post-merger period.

Before the New Zealand Commerce Commission, Testimony on behalf of Orion New Zealand. November 5, 2003. Subject: Productivity measures used in resetting the price path thresholds for electricity distributors in New Zealand.

Before the Public Utilities Commission of Nevada, Rebuttal Testimony on behalf of Sierra Pacific Power Company. Case No: 03-5021. September 2, 2003. Subject: Structure in place for governing and overseeing hedging/risk management process at Westpac Utilities, an operating division of Sierra Pacific Power Company.

Before the State of Maine Public Utilities Commission, Rebuttal Testimony on behalf of FairPoint New England Telephone Companies. July 11, 2003. Subject: Cost of capital.

Before the Public Utilities Commission of Nevada, Testimony on behalf of Sierra Pacific Power Company. Case No: 03-5021. May 14, 2003. Subject: Structure in place for governing and overseeing hedging/risk management process at Westpac Utilities, an operating division of Sierra Pacific Power Company.

Before the Public Utilities Commission of Nevada, Rebuttal Testimony on behalf of Sierra Pacific Power Company. Case No: 03-1014. May 5, 2003. Subject: Prudence of gas procurement and hedging program.

Before the State of Maine Public Utilities Commission, Direct Testimony on behalf of FairPoint New England Telephone Companies. April 7, 2003. Subject: Cost of capital.

Before the Public Utilities Commission of Nevada, Rebuttal Testimony on behalf of Nevada Power Company. Case No: 02-11021. March 31, 2003. Subject: Prudence of gas procurement and hedging program.

Before Federal Communications Commission, Testimony on behalf of Iowa Telecommunications Services, Inc. Case No. March 25, 2003. Subject: Cost of capital.

Before Federal Energy Regulatory Commission, Testimony on behalf of PPL Wallingford Energy LLC. Case No: ERO3-421-000. January 9, 2003. Subject: Cost of equity.

Before the State of New Hampshire Public Utilities Commission, Rebuttal Testimony on behalf of Kearsarge Telephone Company. Case No. DT 01-221. December 20, 2002. Subject: Rebuttal on cost of equity.

Before the New York State Public Service Commission, Affidavit in support of Rochester Gas and Electric Corporation's Response to Staff's November 8, 2002 filing. Case No. 02-E-0198, 02-G-0199. November 14, 2002. Subject: Respond to staff's filing with respect to the rate-of-return and risk impacts of various regulatory mechanisms.

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“Consultation Paper: Development of Approaches Towards Regulating Tariffs for Petroleum Pipelines, Storage and Loading Facilities in South Africa,” Report prepared for the National Energy Regulator of South on the determination of economically feasible approaches towards establishing revenue requirements, regulating the setting/approval of tariffs, and developing rules, guidelines and framework regarding regulatory accounts for the petroleum pipelines, storage, and loading facilities in South Africa. December 14, 2006.

“Regulatory Assessment of the Turkish Electricity Sector.” Report prepared for Prisma Energy on the examination of the economic and regulatory risks facing investors in the privatization of the energy infrastructure of Turkey. December 6, 2006.

“Calculation of the X-Factor in the 2nd Reference Report of the Bundesnetzagentur.” Report prepared for E. ON Ruhrgas, Germany: Design of a regulatory method based on comparison of average tariffs, consistent with new German legislation on the regulation of gas transmission networks. April 21, 2006. (with Graham Shuttleworth and Michael Kraus).

“Cargo Access Charges for the Jorge Chavez International Airport in Lima, Peru.” A report prepared for OSITRAN (Public Transport Infrastructure Regulator) on behalf of Lima Airport Partners S.R.L. February 19, 2004.

A Critique of CEPA’s Report on “Productivity Improvements in Distribution Network Operators.” A report for EDF Energy (with Graham Shuttleworth). December 16, 2003.

Advised on Fare Regulation Issues related to the Impending Merger of the MTRC and KCRC Railroad Companies in Hong Kong, Mercer Consulting on behalf of MTRC, 2003-2004.

“Natural Gas Pipeline Access Regulation”. Report prepared for BHP Petroleum Pty Ltd., May 31, 2001.

“Manual de Procedimientos para el Sistema Uniforme de Cuentas Regulatorias Eléctricas (SUCRE) de México” (April 2000). The report includes an explanation of each of the accounts needed for regulation, recording procedures and the structure the information should take when reporting to the regulator.

“Investigation into Petronets’ Liquid Fuels Pipeline Tariffs: Final Report” (March 9th, 2000). This report presents NERA opinions in the quasi-arbitration of the tariffs disputes in the oil industry in South Africa for their liquids pipelines.

“Seeking Genuine Gas Competition in NSW”, prepared for BHP Petroleum Pty. Ltd., February 18, 2000.

“Análisis y Revisión del Recurso de Revocatoria Interpuesto por la Compañía Boliviana de Energía S.A. (COBEE) a la Resolución SSDE N° 92/99 de la Superintendencia de Electricidad” (September 6, 1999). This report represents NERA’s opinion on COBEE’s appeal in the electricity tariff review process in Bolivia (report in Spanish).

“Gas Sector Regulation Consultancy Services” report prepared for the Vietnam Oil and Gas Corporation, August 10, 1999.

“Natural Gas Demand Estimation for Guatemala, Honduras and El Salvador” (July 19th, 1999). This report done for an international consortium of companies presents calculations of prices and volumes of natural gas demand for three Central American countries if a pipeline is built from Mexico.

“Comments on East Australian Pipeline Limited Access Arrangements: (July 15, 1999). Report prepared on behalf of Incitec Ltd.

“Supplementary Submission to IPART on AGLGN’s Proposed Access Arrangements” on behalf of Incitec Limited (April 27th, 1999). This submission discusses reload practices, customer contributions, operating expenses and recalculates charges for a user of the distribution network in New South Wales, Australia.

“Supplementary Submission to IPART on AGLGN’s Proposed Costs and Tariffs” on behalf of BHP (April 15th, 1999). This submission explains how NERA recalculated charges for AGLGN in New South Wales, Australia.

“Initial Comments on AGLGN’s Revised Access Arrangement Information” on behalf of BHP (March 20th, 1999). This submission presents NERA’s comment to AGLGN submission to IPART in New South Wales, Australia.

“International Restructuring Experience” (February 12th, 1999). This paper surveys a number of countries whose experience of restructuring and competition in the electricity sector is directly relevant to the proposed changes in Mexico – Argentina, Australia, Chile, Guatemala, New Zealand, Norway, Spain, the US and the UK

“Report I: Review of the Regulatory Framework” (January 18th, 1999). This report presents the options for a natural gas framework in Peru.

“Conceptual Framework for the Reform of the Electricity Sector in Mexico: White Paper” (November 24th, 1998). This report represents the White Paper for restructuring of the electricity sector in Mexico which is being used in Congress for debate.

“Precios del Gas Natural para la Generación de Electricidad en el Perú” (November 16th, 1998). This report analyzes different alternatives for the treatment of natural gas prices in the electricity tariff model (report in Spanish).

“Tariffs and Subsidies: Report for the Tariffs Group” (November 10th, 1998). This report presents recommendation on the path for tariffs and subsidies for 1999 to the Electricity Tariffs Group of the Government of Mexico.

“Gasoducto México-Guatemala: Informe Final” (October 22nd, 1998). This report analyzes the legal and regulatory framework in both Mexico and Guatemala and costs and volumes for the building of a natural gas pipeline connecting both countries. A copy of the report was given by President Zedillo (Mexico) to President Arzú (Guatemala) (report in Spanish).

“Checks and Balances in Regulating Power Pools: Seven case Studies. A Report for the Electricity Pool of England and Wales” (September 10th, 1998). This report surveys the regulation of power pools in electricity industries around the world.

“Fuels Policy Group: Recommendations” (September 11th, 1998). This report presents recommendations to the Government of Mexico on their fuels policies for the electricity sector.

“Análisis de Costos e Inversiones. Revisión Tarifaria de Transener” (August 25, 1998). Report given to ENRE (the Argentinean electricity regulator) on behalf of a Consortium of Generators on the analysis of costs and investments to be considered for the revenue requirement of the electricity transmission company (report in Spanish).

“Central America Pipeline: Regulatory Analysis and Proposal” (July 28, 1998). This report presents the regulatory analysis and development of a fiscal, legal and commercial framework proposal for gas import, transportation, distribution and marketing in El Salvador, Honduras and Guatemala regarding the proposed Central American Pipeline.

“Energy Regulation in El Salvador” (July 28, 1998). This report presents a deep analysis of the electricity and natural gas regulatory, legal and tax frameworks in El Salvador.

“Energy Regulation in Guatemala” (July 28, 1998). This report presents a deep analysis of the electricity and natural gas regulatory, legal and tax frameworks in Guatemala.

“The Cost of Capital for Gas Transmission and Distribution Companies in Victoria” (June 22, 1998). Report prepared for BHP Petroleum Pty Ltd.

“Principios Económicos Básicos de Tarificación de Transmisión Eléctrica. Revisión Tarifaria de Transener” (May 26, 1998). The main purpose for this report was to provide an economic and regulatory analysis of laws, decrees, license and documents of the tender to provide advise in the tariff review of Transener (the electricity transmission company in Argentina), to present an economic analysis of transmission tariffs and to provide an opinion on specific topics to be discussed in the public hearing. This report was written for a consortium of generators in Argentina (reports in English and Spanish)

“Asesoría en la Fijación de Tarifas de Transener y Normativa del Transporte, Benchmarking Study” (May 26, 1998). This report compares the costs of Transener (the electricity transmission company in Argentina) with those of other companies elsewhere for a consortium of generators (the electricity transmission company in Argentina).

“International Regulation Tool Kit: Argentina” (March 20, 1998). This document describes the natural gas regulatory framework in Argentina for BG.

“Tarificación de los Servicios Que Prestan las Terminales de Gas LP” (January 9, 1998). The final report given to PEMEX Gas y Petroquímica Básica (México) for the determination of rates for LPG terminals.

“NERA-Pérez Companc Distribution Tariff Model” (January 5, 1998). This report explains the methodology behind NERA’s calculations of distribution tariffs for Pérez Companc in Monterrey.

“Monterrey Natural Gas Market Assessment,” (January 5, 1998). A series of reports were written to present the results of the market study of the demand for natural gas in the geographic zone of Monterrey to a company interested in bidding for the natural gas distributorship.

“Resolving the Question of Escalation of Phases (bb) and (cc) Under the Maui Gas Sale and Purchase Contract”, prepared for the New Zealand Treasury, December 16, 1997.

“Timetable and Regulatory Review for the Monterrey International Public Tender,” (December 5, 1997). A description of the necessary steps to bid for a distribution company as well as an explanation and analysis of natural regulations in Mexico for Pérez Companc.

“Economic Issues in the PFR for 18.3.1(I)(bb) & (cc)”, prepared for the New Zealand Treasury, November 17, 1997.

“NERA’s Distribution Tariff Model” (October 29, 1997). This report explains the methodology behind NERA’s calculations of distribution tariffs for MetroGas.

“Evaluation Design Standards for MetroGas,” (October 24, 1997). This report dealt with the analytical support resulting from work with MetroGas to create a meticulously-documented security criterion analysis that supported its efforts to obtain due recognition—and appropriate tariff treatment—for its costs.

“Ghana Natural Gas Market Assessment,” prepared for the Ministry of Mines and Energy, Ghana (March-July, 1997). A series of four reports assessing prospective gas demand usage and netback prices for a number of proposed pipeline project alternatives.

“Final Report for Russian Oil Transportation & Export Study: Commercial, Contractual & Regulatory Component,” prepared for The World Bank, June 25, 1997.

Response to FIEL’s criticisms regarding NERA’s report “Cálculo del Factor de Eficiencia (X)” (June 2, 1997).

“Impacts on Pemex of Natural Gas Regulations” prepared for Pemex Gas y Petroquímica Básica México, May 21, 1997.

“Market Models for Victoria’s Gas Industry: A Review of Options,” April 1997, prepared for Broken Hill Proprietary (BHP) Petroleum, to propose an alternative model for gas industry restructuring in Victoria, Australia.

“New Market Arrangements for the Victorian Gas Industry,” prepared for Broken Hill Proprietary Petroleum; March 13, 1997.

“CEG Privatization: Comments to the Regulatory Framework,” prepared for Capitaltec Consultoria Economica SA describing our comments with respect to the regulatory framework and the license proposed in the privatization of Riogas and CEG in Rio de Janeiro, Brazil; March 7, 1997.

“Determination of the Efficiency Factor (X),” prepared for ENARGAS, Argentina, January 24, 1997.

“Determination of Costs and Prices for Natural Gas Transmission,” prepared for Pemex Gas y Petroquímica Básica, México, December 19, 1996.

“Regulating Argentina’s Gas Industry,” a report prepared for The Ministry of Economy and The World Bank, November 26, 1996.

“Open Access and Regulation,” prepared for Gascor, in the State of Victoria, Australia; (October 2, 1996).

“A Review and Critique of Russian Oil Transportation Tariffs (Russian Oil Transportation & Export Study; Commercial, Contractual & Regulatory Component),” prepared for The World Bank, June 13, 1996.

“Tariff Options for Transneft (Russian Oil Transportation & Export Study; Commercial, Contractual & Regulatory Component),” prepared for The World Bank, June 6, 1996.

“Comments on the Proposed Amendments to the Regulation of Airports in New Zealand,” prepared for the New Zealand Parliament Select Committee hearings on the regulation of monopolies, March 13, 1996.

“Evaluating the Shell Camisea Project,” prepared for Perupetro S.A., Government of Peru, December 8, 1995.

“Towards a Permanent Pricing and Services Regime,” prepared for British Gas, London, England, November, 1995.

“Final Report: Gas Competition in Victoria,” prepared for Gas Industry Reform Unit, Office of State Owned Enterprises, June 1995.

“Natural Gas Tariff Study,” prepared for the World Bank, May 1995, consisting of:

Principles and Tariffs of Open-Access Gas Transportation and Distribution Tariffs
Handbook for Calculating Open-Access Gas Transportation and Distribution Tariffs

“Economic Implications of the Proposed Enerco/Capital Merger,” prepared for Natural Gas Corporation of New Zealand, December 1994.

“Contract Terms and Prices for Transportation and Distribution of Gas in the United States,” prepared for British Gas TransCo, November 1994.

“Economic Issues in Transport Facing British Gas,” prepared for British Gas plc, December 1993.

“Overview of Natural Gas Corporation's Open-Access Gas Tariffs and Contract Proposals,” prepared for Natural Gas Corporation of New Zealand, October 1993.

**PARTIAL LIST OF CLIENTS SERVED
WORLDWIDE**

ELECTRIC UTILITY

AEP Energy Services, Inc
Alberta Power Limited
American Electric Power Company
Atlantic Electric Company
Boston Edison Company
Central Hudson Gas and Electric
Central Maine Power Company
Central Power & Light Company
Commonwealth Edison Company (Unicom/Exelon)
Commonwealth Energy System
Consolidated Edison Company of New York, Inc
Conowingo Power Company
Duquesne Light Company
Edison Electric Institute
Entergy Gulf States, Inc
Florida Power and Light Company
Green Mountain Power Company
Long Island Lighting Company
Massachusetts Municipal Wholesale Electric
Company
Massachusetts Electric Company
Nantahala Power Company
New York State Electric & Gas Corporation
Niagara Mohawk Power
Ohio Power Company
Orange & Rockland Utilities
Pennsylvania Power and Light Company
Pennsylvania Power Company
Philadelphia Electric Company
PJM electricity transmission owners
Public Service Company of New Hampshire
Public Service Company of New Mexico
Public Service Electric and Gas Company
Portland General Electric Company
Reliant Energy HL&P
Rochester Gas and Electric Corp.
Sierra Pacific Power Corporation
Southwest Electric Power Company
Southwestern Public Service Company
Tampa Electric Company
Texas-New Mexico Power Company
TXU Electric Company
United Illuminating Company
UtiliCorp Networks Canada
Virginia Electric and Power Company
West Penn Power Company
West Texas Utilities Company
Western Massachusetts Electric Co.

GAS UTILITY

ARKLA, Inc.
Atlanta Gas Light Company
Bay State Gas Company
Berkshire Gas Company
Blackstone Gas Company
Boston Gas Company
Bristol & Warren Gas Company
British Gas plc
Brooklyn Union Gas Company
Canadian Western Natural Gas
Chattanooga Gas Company
Colonial Gas Company
Commonwealth Gas Company
Connecticut Natural Gas Corp.
Consolidated Gas Supply Corp.
Elizabethtown Gas Company
Empire State Pipeline Company
ENAGAS (Spain)
EnergyNorth, Inc.
Essex County Gas Company
Fall River Gas Company
Fitchburg Gas & Electric Light Company
Gas and Fuel Corporation of Victoria
Gateway Pipeline Company
Granite State Gas Transmission, Inc.
Great Falls Gas Company
Holyoke, Mass. Gas & Electric Dept.
ICG Utilities (Ontario) Ltd.
KN Energy, Inc.
Middleborough Municipal Gas & Electric
National Fuel Gas Distribution Corp.
Natural Gas Corporation of New Zealand
Natural Gas Pipeline of America
Norwich Department of Public Utilities
Pacific Gas Transmission
Pemex Gas y Petroquímica Básica
Pennsylvania Gas and Water Company
Peoples Gas Light and Coke Company
Providence Gas Company
Southern Connecticut Gas Company
Southwest Gas Corporation
Transwestern Pipeline Company
Valley Gas Company
Washington Gas Light Company
Westfield Gas & Electric Light Dept.
Wisconsin Gas Company
Yankee Gas Services Company